

ABSTRACT

A clamping device allows welding, or other application of three-axis workpieces by providing X, Y, and Z clamping surfaces. The device is equipped with three mutually perpendicular base plates and on one of which a floating right-angle head is mounted through a threaded shaft with quick acting button for rapid advance and return. Inserts like leveling pads can be inserted to the tooling holes in the floating right-angle head to increase working access, especially at the joint area where the X and Y axes meet. A Z-axis attachment including base plate extension with clamping arm and a threaded shaft is mounted by screws to two of the base plates. The clamping arm of the Z-axis can be swung away for easy removal of the workpiece after work. The outside walls of the base plates are machined flat and square so that the angle clamp can be laid sideways to hold a workpiece vertically in place.